



COMMONWEALTH of VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY

Permit No. VA0065552

Effective Date: July 7, 2006
Expiration Date: June 30, 2011

AUTHORIZATION TO DISCHARGE UNDER THE
VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM
AND

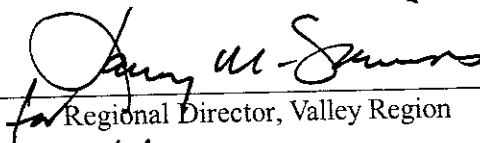
THE VIRGINIA STATE WATER CONTROL LAW

In compliance with the provisions of the Clean Water Act as amended and pursuant to the State Water Control Law and regulations adopted pursuant thereto, the following owner is authorized to discharge in accordance with the information submitted with the permit application, and with this permit cover page, Part I - Effluent Limitations and Monitoring Requirements, and Part II - Conditions Applicable To All VPDES Permits, as set forth herein.

Owner:	Frederick-Winchester Service Authority
Facility Name:	Opequon Water Reclamation Facility
County:	Frederick
Facility Location:	3100 Berryville Pike, Winchester

The owner is authorized to discharge to the following receiving stream:

Stream:	Opequon Creek
River Basin:	Potomac
River Subbasin:	Potomac
Section:	11
Class:	IV
Special Standards:	pH


for Regional Director, Valley Region

July 7, 2006
Date

**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(NPDES)
DISCHARGE MONITORING REPORT(DMR)**

Municipal Major 04/04/2006
DEPT. OF ENVIRONMENTAL QUALITY
(REGIONAL OFFICE)
Valley Regional Office
4411 Early Road
P.O. Box 3000
Harrisonburg VA 22801

VA0065552	001
PERMIT NUMBER	DISCHARGE NUMBER
MONITORING PERIOD	
YEAR	MO
DAY	DAY
TO	

NAME Opequon Water Reclamation Facility
ADDRESS PO Box 43
Winchester VA 22604
FACILITY LOCATION 3100 Berryville Pike, Winchester

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS
BEFORE COMPLETING THIS FORM.

FROM

PARAMETER	QUANTITY OR LOADING		QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
	AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM			
002 PH	REPORTD	*****			*****				
	REQRMNT	*****		6.5	*****	9.5		1/DAY	GRAB
007 DO	REPORTD	*****			*****	*****			
	REQRMNT	*****		7.1	*****	*****		1/DAY	GRAB
012 PHOSPHORUS, TOTAL (AS P)	REPORTD	*****			*****	*****			
	REQRMNT	NL	LBS/D	*****	NL	*****		1/W	24HC
013 NITROGEN, TOTAL (AS N)	REPORTD	*****			*****	*****			
	REQRMNT	NL	LBS/D	*****	NL	*****		1/W	CALC
068 TKN (N-KJEL)	REPORTD	*****			*****	*****			
	REQRMNT	NL	LBS/D	*****	NL	*****		1/W	24HC
120 E. COLI	REPORTD	*****			*****	*****			
	REQRMNT	*****			*****	*****		3D/W	GRAB
157 CL2, TOTAL CONTACT	REPORTD	*****			*****	*****			
	REQRMNT	*****		0.25	*****	*****	0	1/H	GRAB
165 CL2, INST RES MAX	REPORTD	*****			*****	*****			
	REQRMNT	*****			0.0087	0.011		1/DAY	GRAB

ADDITIONAL PERMIT REQUIREMENTS OR COMMENTS
Submit Daily Log with DMR

OPERATOR IN RESPONSIBLE CHARGE			DATE	
TYPED OR PRINTED NAME	SIGNATURE	CERTIFICATE NO.	YEAR	MO.
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE		
TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO.
BYPASSES AND OVERFLOWS		TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)	
TOTAL OCCURRENCES		<p>I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS TO THE BEST OF MY KNOWLEDGE AND BELIEF TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to \$10,000 and/or maximum imprisonment of between 6 months and 5 years.)</p>		

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(NPDES)
DISCHARGE MONITORING REPORT(DMR)

Municipal Major 04/04/2006

DEPT. OF ENVIRONMENTAL QUALITY
(REGIONAL OFFICE)

Valley Regional Office
4411 Early Road
P.O. Box 3000
Harrisonburg VA 22801

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS
BEFORE COMPLETING THIS FORM.

PERMITTEE NAME/ADDRESS(INCLUDE
FACILITY NAME/LOCATION IF DIFFERENT)

NAME Opequon Water Reclamation Facility
ADDRESS PO Box 43
Winchester VA 22604

FACILITY LOCATION 3100 Berryville Pike, Winchester

VA0065552	001				
PERMIT NUMBER	DISCHARGE NUMBER				
MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
FROM			TO		

FROM

PARAMETER	QUANTITY OR LOADING		QUALITY OR CONCENTRATION			NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
	AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS	
253 BOD5, JUN-NOV	REPORTD REQRMNT 206.99	350	KG/D	***** *****	7.1	11	MG/L	1/DAY 24HC
310 CBOD5, DEC-MAY	REPORTD REQRMNT 1514	2400	KG/D	***** *****	25	40	MG/L	1/W 24HC
312 AMMONIA, AS N JUN-NOV	REPORTD REQRMNT *****	*****		***** *****	2.1	2.6	MG/L	1/W 24HC
313 AMMONIA, AS N DEC-MAY	REPORTD REQRMNT *****	*****		***** *****	3.3	4.1	MG/L	1/DAY 24HC
384 TSS, JUN-NOV	REPORTD REQRMNT 950	1400	KG/D	***** *****	30	45	MG/L	1/M 24HC
385 TSS, DEC-MAY	REPORTD REQRMNT 1400	2700	KG/D	***** *****	30	45	MG/L	1/M 24HC
389 NITRITE+NITRATE-N, TOTAL	REPORTD REQRMNT NL	*****	LBS/D	***** *****	NL	*****	MG/L	1/W 24HC
791 NITROGEN, TOTAL (AS N) (MONTHLY LOAD)	REPORTD REQRMNT *****	NL	LB/MO	***** *****	*****	*****		1/M CALC

ADDITIONAL PERMIT REQUIREMENTS OR COMMENTS
Submit Daily Log with DMR

OPERATOR IN RESPONSIBLE CHARGE			DATE	
TOTAL OCCURRENCES	TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)		
BYPASSES AND OVERFLOWS				
I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS TO THE BEST OF MY KNOWLEDGE AND BELIEF TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to \$10,000 and/or maximum imprisonment of between 6 months and 5 years.)				
TYPED OR PRINTED NAME	SIGNATURE	CERTIFICATE NO.	YEAR	MO. DAY
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE		
TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO. DAY

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(NPDES)
DISCHARGE MONITORING REPORT(DMR)

Municipal Major 04/04/2006
DEPT. OF ENVIRONMENTAL QUALITY
(REGIONAL OFFICE)
Valley Regional Office
4411 Early Road
P.O. Box 3000
Harrisonburg VA 22801

PERMITTEE NAME/ADDRESS(INCLUDE
FACILITY NAME/LOCATION IF DIFFERENT)
NAME Opequon Water Reclamation Facility
ADDRESS PO Box 43
Winchester VA 22604
FACILITY 3100 Berryville Pike, Winchester
LOCATION

VA0065552	001				
PERMIT NUMBER	DISCHARGE NUMBER				
MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
			TO		

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS
BEFORE COMPLETING THIS FORM.

FROM

PARAMETER	QUANTITY OR LOADING		QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
	AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM			
792 NITROGEN, TOTAL (AS N) (CALENDAR YEAR)	***** *****	NL	LB/YR	***** *****	NL	***** *****		1/YR	CALC
793 PHOSPHORUS, TOTAL (AS P) (MONTHLY LOAD)	***** *****	NL	LB/MO	***** *****	***** *****	***** *****		1/M	CALC
794 PHOSPHORUS, TOTAL (AS P) (CALENDAR YEAR)	***** *****	NL	LB/YR	***** *****	NL	***** *****		1/YR	CALC
795 ORTHOPHOSPHATE (AS P)	***** *****	*****	LBS/D	***** *****	NL	***** *****		1/W	24HC
805 NITROGEN, TOTAL (AS N) (YEAR-TO-DATE)	***** *****	NL	LB/YR	***** *****	NL	***** *****		1/M	CALC
806 PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)	***** *****	NL	LB/YR	***** *****	NL	***** *****		1/M	CALC
813 FLOW, DEC-MAY	REPORTD REQRMNT 16	NL	MGD	***** *****	***** *****	***** *****		CONT	REC
814 FLOW, JUN-NOV	REPORTD REQRMNT 8.4	NL	MGD	***** *****	***** *****	***** *****		CONT	REC

ADDITIONAL PERMIT REQUIREMENTS OR COMMENTS
Submit Daily Log with DMR

OPERATOR IN RESPONSIBLE CHARGE			DATE	
TYPED OR PRINTED NAME	SIGNATURE	CERTIFICATE NO.	YEAR	MO. DAY
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE	TELEPHONE		
TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO. DAY

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE
PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED
TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION
SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR
THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION
SUBMITTED IS TO THE BEST OF MY KNOWLEDGE AND BELIEF TRUE, ACCURATE AND COMPLETE.
I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION,
INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS. SEE 18
U.S.C. & 1001 AND 33 U.S.C. & 1319. (penalties under these statutes may include
fines up to \$10,000 and/or maximum imprisonment of between 6 months and 5 years.)

THIS REPORT IS REQUIRED BY LAW (33 U. S. C. § 1318 40 CFR 122.60). FAILURE TO REPORT OR FAILURE TO REPORT TRUTHFULLY CAN RESULT IN CIVIL PENALTIES NOT TO EXCEED \$10,000 PER DAY OF VIOLATION: OR IN CRIMINAL PENALTIES NOT TO EXCEED \$25,000 PER DAY OF VIOLATION OR BY IMPRISONMENT FOR NOT MORE THAN FIVE YEARS, OR BOTH.

GENERAL INSTRUCTIONS

1. Complete this form in permanent ink or indelible pencil.
2. Be sure to enter the dates for the first and last day of the period covered by the report on the form in the space marked "Monitoring Period".
3. For those parameters where the "permit requirement" spaces are blank or a limitation appears, provide data in the "reported" spaces in accordance with your permit.
4. Enter the average and, if appropriate, maximum quantities and units in the "reported" spaces in the columns marked "Quantity or Loading".
 $\text{KG/DAY} = \text{Concentration(mg/l)} \times \text{Flow(MGD)} \times 3.785$.
5. Enter maximum, minimum, and/or average concentrations and units in the "reported" spaces in the columns marked "Quality or Concentration".
6. Enter the number of samples which do not comply with the maximum and /or minimum permit requirements in the "reported" space in the column marked "No. Ex."
7. Enter the actual frequency of analysis for each parameter (number of times per day, week, month) in the "reported" space in the column marked "Frequency of Analysis".
8. Enter the actual type of sample collected for each parameter in the "reported" space in the column marked "Sample Type".
9. Enter additional required data or comments in the space marked "additional permit requirements or comments".
10. Record the number of bypasses during the month, the total flow in million gallons and BOD5 in kilograms in the proper columns in the section marked "Bypasses and Overflows".
11. The operator in responsible charge of the facility should review the form and sign in the space provided. If the plant is required to have a licensed operator, the operator's certificate number should be reported in the space provided.
12. The principal executive officer should then review the form and sign in the space provided and provide a telephone number where he/she can be reached.
13. You are required to sample at the frequency and type indicated in your permit.
14. Send the completed form to your Dept. of Environmental Quality Regional Office by the 10th of each month.
15. You are required to retain a copy of the report for your records.
16. Where violations of permit requirements are reported, attach a brief explanation in accordance with the permit requirements describing causes and corrective actions taken. Reference each violation by date.
17. If you have any questions, contact the Dept. of Environmental Quality Regional Office.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

- INTERIM - During the period beginning with the permit's effective date and lasting until the issuance of a Certificate to Operate (CTO) for an expanded facility, or upon compliance with the schedule in Part I.C.1, whichever occurs first, the permittee is authorized to discharge from outfall number 001.

This discharge shall be limited and monitored as specified below:

EFFLUENT CHARACTERISTICS

DISCHARGE LIMITATIONS

MONITORING REQUIREMENTS

	Monthly Average	Weekly Average	Minimum	Maximum	Frequency	Sample Type
Flow (MGD) ^a	NL	NA	NA	NL	Continuous	T/I/R
pH (standard units)	NA	NA	6.5	9.5	1/Day	Grab
Dissolved Oxygen (mg/L)	NA	NA	7.1	NA	1/Day	Grab
BOD ₅ (Jun-Nov) ^c	7.1 mg/L	206.99 kg/d	11 mg/L	350 kg/d	1/Day	24 HC
CBOD ₅ (Dec-May) ^{c,e}	25 mg/L	1514 kg/d	40 mg/L	2400 kg/d	1/Week	24 HC
Suspended Solids (Jun-Nov) ^{c,g}	30 mg/L	950 kg/d	45 mg/L	1400 kg/d	1/Month	24 HC
Suspended Solids (Dec-May) ^{c,g}	30 mg/L	1400 kg/d	45 mg/L	2700 kg/d	1/Month	24 HC
Ammonia-N (Jun-Nov) (mg/L) ^c	2.1	2.6	NA	NA	1/Week	24 HC
Ammonia-N (Dec-May) (mg/L) ^c	3.3	4.1	NA	NA	1/Day	24 HC
Total Residual Chlorine (TRC) (mg/L) ^b	0.0087	0.011	NA	NA	1/Day	Grab
E. coli (N/100 mL) ^b	126 Geometric Mean	NA	NA	NA	3 Days/Week @ 48-Hr Intervals Between 10am and 4pm	Grab
Total Phosphorus ^c	NL (mg/L)	NL (lb/d)	NA	NA	1/Week	24 HC
Total Phosphorus - Monthly ^c	NA	NA	NA	NL (lb/mo)	1/Month	Calculated
Total Phosphorus - Year to Date ^{c,e}	NL (mg/L)	NA	NA	NL (lb/yr)	1/Month	Calculated
Total Phosphorus - Calendar year ^{c,e,f}	NL (mg/L)	NA	NA	NL (lb/yr)	1/Year	Calculated
Orthophosphate ^c	NL (mg/L)	NL (lb/d)	NA	NA	1/Week	24 HC
Total Kjeldahl Nitrogen (as N) ^c	NL (mg/L)	NL (lb/d)	NA	NA	1/Week	24 HC
Nitrate plus Nitrite (as N) ^c	NL (mg/L)	NL (lb/d)	NA	NA	1/Week	24 HC
Total Nitrogen ^d	NL (mg/L)	NL (lb/d)	NA	NA	1/Week	Calculated
Total Nitrogen - Monthly ^c	NA	NA	NA	NL (lb/mo)	1/Month	Calculated
Total Nitrogen - Year to Date ^{c,e}	NL (mg/L)	NA	NA	NL (lb/yr)	1/Month	Calculated
Total Nitrogen - Calendar Year ^{c,e,f}	NL (mg/L)	NA	NA	NL (lb/yr)	1/Year	Calculated
Whole Effluent Toxicity (TU ₀₁) ^f	NA	NA	NA	1.61	1/Quarter	24 HC
NL = No Limitation, monitoring required NA = Not Applicable T/I/R = Totalizing, Indicating, and Recording					24 HC = 24-hour composite	

The design flow of this treatment facility is 8.4 MGD (Jun-Nov) 16.0 MGD (Dec-May). See Part I.G.1. for additional requirements related to facility flows.

- The design flow of this treatment facility is 8.4 MGD (Jun-Nov) 16.0 MGD (Dec-May). See Part I.G.1. for additional requirements related to facility flows.
- See Part I.B. for disinfection requirements.
- See Part I.D. for additional monitoring instructions and reporting requirements.
- Total Nitrogen, which is the sum of Total Kjeldahl Nitrogen and Nitrates plus Nitrites, shall be derived from the results of those tests.
- Year to Date and Calendar Year concentration limits to be reported as an annual average.
- See Part I.C. for Schedule of Compliance.
- At least 85% removal for CBOD₅ and TSS must be attained for this discharge
- There shall be no discharge of floating solids or visible foam in other than trace amounts.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

2. FINAL - During the period following the facility's compliance with the schedule in Part I.C.1 and lasting until the permit's expiration date or until the issuance of a CTO for an expanded facility, whichever occurs first, the permittee is authorized to discharge from outfall number 001.

This discharge shall be limited and monitored as specified below:

EFFLUENT CHARACTERISTICS			DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Monthly Average	Weekly Average	Minimum	Maximum	Frequency T/I/R	Sample Type
Flow (MGD) ^a	NL	NA	NA	NL	Continuous	T/I/R
pH (standard units)	NA	NA	6.5	9.5	1/Day	Grab
Dissolved Oxygen (mg/L)	NA	NA	7.1	NA	1/Day	Grab
BOD ₅ (Jun-Nov) ^c	7.1 mg/L	11 mg/L	NA	NA	1/Day	24 HC
CBOD ₅ (Dec-May) ^{c,g}	25 mg/L	40 mg/L	NA	NA	1/Week	24 HC
Suspended Solids ^{c,g}	30 mg/L	45 mg/L	NA	NA	1/Month	24 HC
Ammonia-N (Jun-Nov) (mg/L) ^c	2.1	2.6	NA	NA	1/Day	24 HC
Ammonia-N (Dec-May) (mg/L) ^c	3.8	4.7	NA	NA	1/Day	24 HC
Total Residual Chlorine (TRC) (mg/L) ^b	0.0087	0.011	NA	NA	1/Day	Grab
E. coli (N/100 mL) ^b	126 Geometric Mean	NA	NA	NA	3 Days/Week @ 48-Hr Intervals Between 10am and 4pm	Grab
Total Phosphorus ^c	NL (mg/L)	NA	NA	NA	1/Week	24 HC
Total Phosphorus - Monthly ^c	NA	NA	NA	NL (lb/mo)	1/Month	Calculated
Total Phosphorus - Year to Date ^{c,e}	NL (mg/L)	NA	NA	NL (lb/yr)	1/Month	Calculated
Total Phosphorus - Calendar year ^{c,e}	NL (mg/L)	NA	NA	7,675 lb/yr	1/Year	Calculated
Orthophosphate ^c	NL (mg/L)	NA	NA	NA	1/Week	24 HC
Total Kjeldahl Nitrogen (as N) ^c	NL (mg/L)	NA	NA	NA	1/Week	24 HC
Nitrate plus Nitrite (as N) ^c	NL (mg/L)	NA	NA	NA	1/Week	24 HC
Total Nitrogen ^d	NL (mg/L)	NA	NA	NA	1/Week	Calculated
Total Nitrogen - Monthly ^c	NA	NA	NA	NL (lb/mo)	1/Month	Calculated
Total Nitrogen - Year to Date ^{c,e}	NL (mg/L)	NA	NA	NL (lb/yr)	1/Month	Calculated
Total Nitrogen - Calendar Year ^{c,e}	NL (mg/L)	NA	NA	102,336 lb/yr	1/Year	Calculated
Whole Effluent Toxicity (TU _c) ^f	NA	NA	NA	1.61	1/Quarter	24 HC
NL = No Limitation, monitoring required NA = Not Applicable T/I/R = Totalizing, Indicating, and Recording					24 HC = 24-hour composite	

- a. The design flow of this treatment facility is 8.4 MGD. See Part I.G.1. for additional requirements related to facility flows.
- b. See Part I.B. for disinfection requirements.
- c. See Part I.C. for additional monitoring instructions and reporting requirements.
- d. Total Nitrogen, which is the sum of Total Kjeldahl Nitrogen and Nitrates plus Nitrites, shall be derived from the results of those tests.
- e. Year to Date and Calendar Year concentration limits to be reported as an annual average.
- f. See Part I.C. for Schedule of Compliance.
- g. At least 85% removal for CBOD₅ and TSS must be attained for this discharge
- h. There shall be no discharge of floating solids or visible foam in other than trace amounts.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

3. FINAL - Upon the issuance of a CTO for the 10.4 MGD facility, and lasting until the permit's expiration date, or until the issuance of a CTO for the 12.6 MGD facility, whichever occurs first, the permittee is authorized to discharge from outfall number 001.

This discharge shall be limited and monitored as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS			MONITORING REQUIREMENTS	
	Monthly Average	Weekly Average	Minimum	Maximum	Frequency Sample Type
Flow (MGD) ^a	NL	NA	NA	NL	Continuous T/IR
pH (standard units)	NA	NA	6.5	9.5	1/Day Grab
Dissolved Oxygen (mg/L)	NA	NA	7.1	NA	1/Day Grab
BOD ₅ (Jun-Nov) ^c	7.1 mg/L	206.99 kg/d	11 mg/L	430 kg/d	1/Day 24 HC
CBOD ₅ (Dec-May) ^{c,f}	25 mg/L	980 kg/d	40 mg/L	1600 kg/d	1/Week 24 HC
Suspended Solids ^{c,f}	30 mg/L	1200 kg/d	45 mg/L	1800 kg/d	1/Week 24 HC
Ammonia-N (Jun-Nov) (mg/L) ^c	2.1	2.6	NA	NA	1/Day 24 HC
Ammonia-N (Dec-May) (mg/L) ^c	3.6	4.4	NA	NA	1/Day 24 HC
Total Residual Chlorine (TRC) (mg/L) ^b	0.0087	0.011	NA	NA	1/Day Grab
E. coli (N/100 mL) ^b	126 Geometric Mean	NA	NA	NA	3 Days/Week @ 48-Hr Intervals Between 10am and 4pm Grab
Total Phosphorus ^c	NL (mg/L)	NL (lb/d)	NA	NA	1/Week 24 HC
Total Phosphorus - Monthly ^c	NA	NA	NA	NL (lb/mo)	Calculated
Total Phosphorus - Year to Date ^{c,e}	NL (mg/L)	NA	NA	NL (lb/yr)	Calculated
Total Phosphorus - Calendar year ^{c,e}	0.3 mg/L	NA	NA	7,675 lb/yr	Calculated
Orthophosphate ^c	NL (mg/L)	NL (lb/d)	NA	NA	1/Week 24 HC
Total Kjeldahl Nitrogen (as N) ^c	NL (mg/L)	NL (lb/d)	NA	NA	1/Week 24 HC
Nitrate plus Nitrite (as N) ^c	NL (mg/L)	NL (lb/d)	NA	NA	1/Week 24 HC
Total Nitrogen ^d	NL (mg/L)	NL (lb/d)	NA	NA	1/Week Calculated
Total Nitrogen - Monthly ^c	NA	NA	NA	NL (lb/mo)	Calculated
Total Nitrogen - Year to Date ^{c,e}	NL (mg/L)	NA	NA	NL (lb/yr)	Calculated
Total Nitrogen - Calendar Year ^{c,e}	3.0 mg/L	NA	NA	102,336 lb/yr	Calculated
Whole Effluent Toxicity (TU _c)	NA	NA	NA	1.59	1/Quarter 24 HC
NL = No Limitation, monitoring required NA = Not Applicable T/IR = Totalizing, Indicating, and Recording					24 HC = 24-hour composite

a. The design flow of this treatment facility is 10.4 MGD. See Part I.G.1. for additional requirements related to facility flows.

b. See Part I.B. for disinfection requirements.

c. See Part I.C. for additional monitoring instructions and reporting requirements.

d. Total Nitrogen, which is the sum of Total Kjeldahl Nitrogen and Nitrates plus Nitrites, shall be derived from the results of those tests.

e. Year to Date and Calendar Year concentration limits to be reported as an annual average.

f. At least 85% removal for CBOD₅ and TSS must be attained for this discharge

g. There shall be no discharge of floating solids or visible foam in other than trace amounts.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

4. FINAL - Upon the issuance of a CTO for the 12.6 MGD facility, and lasting until the permit's expiration date, the permittee is authorized to discharge from outfall number 001.

This discharge shall be limited and monitored as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS			MONITORING REQUIREMENTS		
	Monthly Average	Weekly Average	Minimum	Maximum	Frequency	Sample Type
Flow (MGD) ^a	NL	NA	NA	NL	Continuous	T/I/R
pH (standard units)	NA	NA	6.5	9.5	1/Day	Grab
Dissolved Oxygen (mg/L)	NA	NA	7.1	NA	1/Day	Grab
BOD ₅ (Jun-Nov) ^c	7.1 mg/L	206.99 kg/d	11 mg/L	520 kg/d	1/Day	24 HC
CBOD ₅ (Dec-May) ^{c,f}	25 mg/L	1200 kg/d	40 mg/L	1900 kg/d	1/Week	24 HC
Suspended Solids ^c	29 mg/L	1400 kg/d	44 mg/L	2100 kg/d	1/Month	24 HC
Ammonia-N (Jun-Nov) (mg/L) ^c	2.0	2.5	NA	NA	1/Day	24 HC
Ammonia-N (Dec-May) (mg/L) ^c	3.5	4.3	NA	NA	1/Day	24 HC
Total Residual Chlorine (TRC) (mg/L) ^b	0.0087	0.011	NA	NA	1/Day	Grab
E. coli (N/100 mL) ^b	122 Geometric Mean	NA	NA	NA	3 Days/Week @ 48-Hr Intervals Between 10am and 4pm	Grab
Total Phosphorus ^c	NL (mg/L)	NL (lb/d)	NA	NA	1/Week	24 HC
Total Phosphorus - Monthly ^c	NA	NA	NA	NL (lb/mo)	1/Month	Calculated
Total Phosphorus - Year to Date ^{c,e}	NL (mg/L)	NA	NA	NL (lb/yr)	1/Month	Calculated
Total Phosphorus - Calendar year ^{c,e}	0.3 mg/L	NA	NA	7,675 lb/yr	1/Year	Calculated
Orthophosphate ^c	NL (mg/L)	NL (lb/d)	NA	NA	1/Week	24 HC
Total Kjeldahl Nitrogen (as N) ^c	NL (mg/L)	NL (lb/d)	NA	NA	1/Week	24 HC
Nitrate plus Nitrite (as N) ^c	NL (mg/L)	NL (lb/d)	NA	NA	1/Week	24 HC
Total Nitrogen ^d	NL (mg/L)	NL (lb/d)	NA	NA	1/Week	Calculated
Total Nitrogen - Monthly ^c	NA	NA	NA	NL (lb/mo)	1/Month	Calculated
Total Nitrogen - Year to Date ^{c,e}	NL (mg/L)	NA	NA	NL (lb/yr)	1/Month	Calculated
Total Nitrogen - Calendar Year ^{c,e}	3.0 mg/L	NA	NA	102,336 lb/yr	1/Year	Calculated
Whole Effluent Toxicity (TU _c)	NA	NA	NA	1.56	1/Quarter	24 HC
NL = No Limitation, monitoring required NA = Not Applicable T/I/R = Totalizing, Indicating, and Recording					24 HC = 24-hour composite	

a. The design flow of this treatment facility is 12.6 MGD. See Part I.G.1. for additional requirements related to facility flows.

b. See Part I.B. for disinfection requirements.

c. See Part I.C. for additional monitoring instructions and reporting requirements.

d. Total Nitrogen, which is the sum of Total Kjeldahl Nitrogen and Nitrates plus Nitrites, shall be derived from the results of those tests.

e. Year to Date and Calendar Year concentration limits to be reported as an annual average.

f. At least 85% removal for CBOD₅ and TSS must be attained for this discharge

g. There shall be no discharge of floating solids or visible foam in other than trace amounts.

B. ADDITIONAL TRC LIMITATIONS AND MONITORING REQUIREMENTS

1. The permittee shall monitor the Total Residual Chlorine (TRC) at the outlet of the chlorine contact tank, prior to dechlorination, 1/hour by grab sample.
2. The TRC concentration after the chlorine contact tank, prior to dechlorination, shall be greater than or equal to 0.25 mg/L at all times. This TRC may be lowered where the permittee has demonstrated adequate disinfection.
3. If an alternative to chlorination as a disinfection method is chosen, the E. coli parameter shall continue to be limited and monitored by the permittee as specified in Part I.A. and shall substitute for the TRC requirements specified elsewhere in Part I.

E. coli sampling and analysis shall be performed in accordance with 40 CFR 141.21, except that maximum holding times shall be limited in accordance with 40 CFR 136 to six hours.

C. SCHEDULE OF COMPLIANCE

1. The permittee shall comply with the Total Phosphorus and Total Nitrogen limitations included in Part I.A.2. in accordance with the following schedule of compliance:
 - a. Submit progress reports By January 10, 2007, and annually thereafter.
 - b. Comply with effluent limitations By January 1, 2011

By January 15, 2011, the permittee shall submit a report to DEQ-Valley Regional Office indicating whether compliance with the final Total Phosphorus and Total Nitrogen limitations has been achieved.

2. The permittee shall achieve compliance with the Whole Effluent Toxicity limit specified in Part I.A.1. and Part I.A.2. of this permit in accordance with the following schedule:
 - a. Submit Progress Report By February 12, 2007, and annually thereafter
 - b. Achieve compliance with limit By December 31, 2009

No later than January 14, 2010, the permittee shall submit to the DEQ Valley Regional Office a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the expected date of compliance with the effluent limit.

D. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - ADDITIONAL INSTRUCTIONS

1. Quantification Levels (QLs) shall be less than or equal to the following concentrations:

<u>Effluent Characteristic</u>	<u>Quantification Level</u>
(C)BOD ₅	5 mg/L
Suspended Solids	1.0 mg/L
Chlorine	0.10 mg/L
Ammonia-N	0.20 mg/L
Total Phosphorus	0.10 mg/L
Orthophosphate	0.10 mg/L
TKN	0.50 mg/L
Nitrate-Nitrite	0.50 mg/L

2. Compliance Reporting Under Part I.A.

- a. Monthly Average – Compliance with the monthly average limitations and/or reporting requirements for the parameters listed in Part I.D.1. above shall be determined as follows: All data below the specified quantification level (QL) shall be treated as zeros. All data equal to or above the QL shall be treated as reported. Arithmetic concentration and/or loading averages (as applicable) shall be calculated using all reported data for the month, including the defined zeros. These averages shall be reported on the DMR. If all data are less than the QL, then “<QL” shall be reported on the DMR for the concentration and/or loading values. Otherwise the average values shall be reported as calculated.
- b. Maximum Weekly Average – Compliance with the weekly average limitations and/or reporting requirements for the parameters listed in Part I.D.1. above shall be determined as follows: All data below the specified quantification level (QL) shall be treated as zeros. All data equal to or above the QL shall be treated as reported. Arithmetic concentration and/or loading averages (as applicable) shall be calculated using all reported data, including the defined zeros, collected within each complete calendar week entirely contained within the reporting month. The maximum weekly concentration and/or loading averages thus determined shall be reported on the DMR. If all data are less than the QL, then “<QL” shall be reported on the DMR for both the concentration and/or loading values. Otherwise the average values shall be reported as calculated.
- c. Any single datum required shall be reported as “<QL” if it is less than the QL listed in Part I.D.1. above. Otherwise, the numerical value shall be reported.
- d. Monitoring results reported on the Discharge Monitoring Report (DMR) shall be reported to the accuracy of the test, which must be capable of at least the same number of significant digits as the permit limit for the given parameter. Rounding the results to the number of significant digits in the permit, where the test method

is sensitive enough to report more, is not acceptable. If there is not a method allowed by the permit that is accurate enough to measure two significant digits below the value of 1.0, it shall be the permittee's responsibility to provide documentation for DEQ approval demonstrating that only one significant figure can accurately be reported.

- e. Nutrient Reporting Calculations – For each calendar month, the DMR shall show the monthly average load, total monthly load, and annual load (lb) calculated in accordance with the following formulae:

$$ML_{avg} = (\sum(C * Q * 8.3438)) \div d$$

where:

ML_{avg} = monthly average load (lb/d)

C = concentration (mg/L)

Q = flow on the day of the concentration monitoring (MGD)

d = number of days in the calendar month on which concentration monitoring was performed

$$ML = ML_{avg} * d$$

where:

ML = total monthly load (lb/mo)

ML_{avg} = monthly average load as reported on DMR (lb/d)

d = number of discharge days in the calendar month

$$AL-YTD = \sum_{(Jan-current\ month)} ML$$

where:

AL-YTD = calendar year-to-date annual load (lb/yr)

ML = total monthly load (lb/mo) as reported on DMR

The total nitrogen and phosphorus loads (lb) for each calendar year (AL) shall be shown on the December DMR due January 10th of the following year. These values shall be calculated in accordance with the following formulae:

$$AL = \sum_{(Jan-Dec)} ML$$

where:

AL = calendar year annual load (lb)

ML = total monthly load (lb/mo) as reported on DMR

For each calendar month, the DMR shall show the calendar year-to-date average concentration (mg/L) calculated in accordance with the following formulae:

$$AC_{avg-YTD} = (\sum_{(Jan-current\ month)} MC_{avg}) \div (\# \text{ of months})$$

where:

$MC_{avg-YTD}$ = calendar year-to-date average concentration (mg/L)

MC_{avg} = monthly average concentration (mg/L) as reported on DMR

The total nitrogen and phosphorus average concentrations (mg/L) for each calendar year (AC) shall be shown on the December DMR due January 10th of the following year. These values shall be calculated in accordance with the following formulae:

$$AC_{avg} = (\sum_{(Jan-Dec)} MC_{avg}) \div 12$$

where:

AC_{avg} = calendar year average concentration (mg/L)

MC_{avg} = monthly average concentration (mg/L) as reported on DMR

E. PRETREATMENT PROGRAM REQUIREMENTS

1. The permittee's pretreatment program has been approved. The program is an enforceable part of this permit. The permittee shall:
 - a. Implement a pretreatment program that complies with the Clean Water Act, Water Control Law, State regulations and the approved program.
 - b. Submit to the Department of Environmental Quality (DEQ), Valley Regional Office, an annual report that describes the permittee's program activities over the previous year. The annual report shall be submitted no later than January 31st of each year and shall include:
 - (1) An updated list of the Significant Industrial Users* to the treatment works showing the categorical standards and local limits applicable to each.
 - (2) A summary of the compliance status of each Significant Industrial User with pretreatment standards and permit requirements.
 - (3) A summary of the number and types of Significant Industrial User sampling and inspections performed by the POTW.
 - (4) All information concerning any interference, upset, VPDES permit or Water Quality Standards violations directly attributable to Significant Industrial Users and enforcement actions taken to alleviate said events.
 - (5) A description of all enforcement actions taken against Significant Industrial Users over the previous 12 months.
 - (6) A summary of any changes to the submitted pretreatment program that have not been previously reported to the DEQ Valley Regional Office.
 - (7) A summary of the permits issued to Significant Industrial Users since the last annual report.

- (8) POTW and self-monitoring results for Significant Industrial Users determined to be in significant non-compliance during the reporting period.
 - (9) Results of the POTW's influent/effluent/sludge sampling, not previously submitted to DEQ.
 - (10) Copies of newspaper publications of all Significant Industrial Users in significant non-compliance during the reporting period. This is due no later than March 31st of each year.
 - (11) Signature of an authorized representative.
- c. Within 180 days of the effective date of this permit, submit to the DEQ Valley Regional Office a survey of all Industrial Users discharging to the POTW. The information shall be submitted to the POTW on the DEQ's Discharger Survey Form or an equivalent form that includes the quantity and quality of the wastewater. Survey results shall include the identification of significant industrial users of the POTW.
- In lieu of the survey, the permittee may elect to develop, submit for approval and implement the plan to continuously survey the industrial community in their jurisdiction.
- d. Submit any changes to the approved pretreatment program to the DEQ Valley Regional Office and obtain approval before implementation of the changes.
- e. Ensure all Significant Industrial Users' permits are issued and reissued in a timely manner and that the Significant Industrial User permits issued by the POTW are effective and enforceable.
- f. Inspect and sample all Significant Industrial Users at a minimum of once a year.
- (1) Sampling shall include all regulated parameters, and shall be representative of the wastewater discharged.
 - (2) Inspection of the Significant Industrial Users shall cover all areas which could result in wastewater discharge to the treatment works including manufacturing, chemical storage, pretreatment facilities, spill prevention and control procedures, hazardous waste generation and Significant Industrial User's self-monitoring and records.
- g. Implement the reporting requirements of Part VII of the VPDES Permit Regulation.

- h. Review the Enforcement Response Plan (ERP) and ensure it meets state and federal regulatory requirements. The approved ERP is an enforceable part of this permit and shall be implemented.
 - i. Develop local limits or reevaluate local limits using current influent, effluent and sludge monitoring data and submit the data and results of the evaluation to the DEQ Valley Regional Office within one year of the effective date of this permit. All Significant Industrial Users shall be sampled at the end of any categorical process and at the entrance to the treatment works.
 - j. Ensure that adequate resources are available to implement the approved program.
 - k. Meet all public participation requirements and annually public notice Significant Industrial Users in significant non-compliance with pretreatment standards and requirements for the previous 12 months.
2. The DEQ may require the POTW to institute changes to its pretreatment program:
- a. If the approved program is not implemented in a way satisfying the requirements of the Clean Water Act, Water Control Law or State regulations;
 - b. If problems such as pass-through, interference, water quality standards violations or sludge contamination develop or continue; or
 - c. If federal, state or local requirements change.

* A Significant Industrial User is one that:

- (a) Has a process wastewater** flow of 25,000 gallons or more per average workday;
- (b) Contributes a process wastestream which makes up 5% or more of the average dry weather hydraulic or organic capacity of the POTW;
- (c) Is subject to the categorical pretreatment standards; or
- (d) Has significant impact, either singularly or in combination with other Significant Dischargers, on the treatment works or the quality of its effluent.

** Process wastewater excludes sanitary wastewater, noncontact cooling water and boiler blowdown.

F. TOXICS MANAGEMENT PROGRAM (TMP)

1. 8.4 MGD Flow Tier

- a. The Whole Effluent Toxicity (WET) Limitation of $TU_c = 1.61$ ($NOEC \geq 62\%$) in Part I.A.1. and Part I.A.2. is effective December 31, 2009, and lasts until the next permit's expiration date or the issuance of the Certificate to Operate (CTO) for a higher flow tier, whichever occurs first.

- b. Commencing within three months of the effective date of the limit, the permittee shall conduct quarterly chronic toxicity tests using 24-hour flow-proportioned composite samples of final effluent from outfall 001. The chronic toxicity tests to use are:

Chronic 3-Brood Static Renewal Survival and Reproduction Tests using *Ceriodaphnia dubia*, and

Chronic 7-Day Static Renewal Survival and Growth Tests using *Pimephales promelas*

These chronic tests shall be conducted in such a manner and at sufficient dilution (performed with a minimum of 5 dilutions) for determination of the "No Observed Effect Concentration" (NOEC) for survival and reproduction or growth. Express the NOEC as TU_c (Chronic Toxicity Units) by dividing 100/NOEC for DMR reporting. The IC₂₅ should be included on the submitted test reports. Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3.

- c. The permit may be modified or revoked and reissued to include pollutant-specific limits in lieu of a WET limit should it be demonstrated that toxicity is due to specific parameters. The pollutant-specific limits must control the toxicity of the effluent.
- d. The permittee shall supply 2 copies of the toxicity test reports specified in this Toxics Management Program to VRO-DEQ with the specified DMR in accordance with the following schedule:

<u>Period</u>	<u>Schedule</u>	<u>DMR/Report Submittal Dates</u>
1 st Quarter	1/1/2010 to 3/31/2010	With the Discharge Monitoring Report (DMR) for the month following the month in which the tests were conducted
Quarterly thereafter	Every third month following the previous quarter for the remainder of the permit, or until the issuance of the CTO for a higher flow tier	Every third month following the previous quarterly submittal

2. 10.4 MGD and 12.6 MGD Flow Tiers

- a. The Whole Effluent Toxicity (WET) Limitations in Part I.A.3. and Part I.A.4. for these flow tiers are effective upon issuance of the respective Certificate to

Operate (CTO), and last until the permit's expiration date or the issuance of the CTO for a higher flow tier, whichever occurs first. The WET Limitations are as follows:

Design Flow (MGD)	WET Limit (TU _c)	NOEC
10.4	1.59	≥ 63%
12.6	1.56	≥ 64%

- b. Commencing in the calendar quarter that is six months from the date of issuance of the CTO, the permittee shall conduct quarterly chronic toxicity tests using 24-hour flow-proportioned composite samples of final effluent from outfall 001. The chronic toxicity tests to use are:

Chronic 3-Brood Static Renewal Survival and Reproduction Tests using *Ceriodaphnia dubia*, and

Chronic 7-Day Static Renewal Survival and Growth Tests using *Pimephales promelas*

These chronic tests shall be conducted in such a manner and at sufficient dilution (performed with a minimum of 5 dilutions) for determination of the "No Observed Effect Concentration" (NOEC) for survival and reproduction or growth. Express the NOEC as TU_c (Chronic Toxicity Units) by dividing 100/NOEC for DMR reporting. The IC₂₅ should be included on the submitted test reports. Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3.

- c. The permit may be modified or revoked and reissued to include pollutant-specific limits in lieu of a WET limit should it be demonstrated that toxicity is due to specific parameters. The pollutant-specific limits must control the toxicity of the effluent.
- d. The permittee shall supply 2 copies of the toxicity test reports specified in this Toxics Management Program to VRO-DEQ with the specified DMR in accordance with the following schedule:

<u>Period</u>	<u>Schedule</u>	<u>DMR/Report Submittal Dates</u>
1 st Quarter	In the calendar quarter that is 6 months from the issuance of the CTO	With the Discharge Monitoring Report (DMR) for the month following the month in which the tests were conducted

<u>Period</u>	<u>Schedule</u>	<u>DMR/Report Submittal Dates</u>
Quarterly thereafter	Every third month following the previous quarter for the remainder of the permit, or until the issuance of the CTO for a higher flow tier	Every third month following the previous quarterly submittal

G. OTHER REQUIREMENTS AND SPECIAL CONDITIONS

1. 95% Capacity Reopener -- A written notice and a plan of action for ensuring continued compliance with the terms of this permit shall be submitted to:

Department of Environmental Quality
Valley Regional Office
P.O. Box 3000
Harrisonburg, Virginia 22801

when the monthly average flow influent to the sewage treatment plant reaches 95 percent of the design capacity authorized in this permit for each month of any three consecutive month period. The written notice shall be submitted within 30 days and the plan of action shall be received at the Valley Regional Office no later than 90 days from the third consecutive month for which the flow reached 95 percent of the design capacity. The plan shall include the necessary steps and a prompt schedule of implementation for controlling any current or reasonably anticipated problem resulting from high influent flows. Failure to submit an adequate plan in a timely manner shall be deemed a violation of this permit.

2. Indirect Dischargers -- The permittee shall provide adequate notice to DEQ, Valley Regional Office, of the following:
 - a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Section 301 or 306 of the Clean Water Act and the State Water Control Law if it were directly discharging those pollutants; and
 - b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of this permit.

Adequate notice shall include information on 1) the quality and quantity of effluent introduced into the treatment works, and 2) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the treatment works.

3. Materials Handling/Storage -- Any and all product, materials, industrial wastes, and/or other wastes resulting from the purchase, sale, mining, extraction, transport, preparation, and/or storage of raw or intermediate materials, final product, by-product or wastes, shall be handled, disposed of, and/or stored in such a manner so as not to permit a discharge of such product, materials, industrial wastes, and/or other wastes to State waters, except as expressly authorized.
4. CTC/CTO Requirement -- The permittee shall, in accordance with the DEQ Sewage Collection and Treatment Regulation (9 VAC 25-790), obtain a Certificate to Construct (CTC) and a Certificate to Operate (CTO) prior to constructing and operating the wastewater treatment works. Noncompliance with the CTC or CTO shall be deemed a violation of the permit.
5. Operations and Maintenance Manual Requirement -- The permittee shall maintain a current and approved O&M Manual for the treatment works. Within 90 days of completion of construction of the expanded facilities, the permittee shall submit for approval a revised O&M Manual to the DEQ Valley Regional Office. This manual shall detail the practices and procedures which will be followed to ensure compliance with the requirements of this permit. This manual shall include, but not necessarily be limited to, the following items:
 - a. Treatment works design, treatment works operation, routine preventative maintenance of units within the treatment system, critical spare parts inventory and record keeping;
 - b. Techniques to be employed in the collection, preservation and analysis of effluent samples;
 - c. Procedures for handling, storing, and disposing of all wastes, fluids, and pollutants characterized in Part I.G.3. that will prevent these materials from reaching state waters.

The permittee shall operate the treatment works in accordance with the approved O&M Manual. Any changes in the practices and procedures followed by the permittee shall be documented and submitted for staff approval within 90 days of the effective date of the changes. Upon approval of the submitted manual changes, the revised manual becomes an enforceable part of the permit.

6. Sludge Reopener -- This permit may be modified or, alternatively, revoked and reissued if any applicable standard for sewage sludge use or disposal promulgated under Section 405(d) of the Clean Water Act is more stringent than any requirements for sludge use or disposal in this permit, or controls a pollutant or practice not limited in this permit.
7. SMP Requirement -- The permittee shall conduct all sewage sludge use or disposal activities in accordance with the approved Sludge Management Plan (SMP). Any proposed changes in the sewage sludge use or disposal practices or procedures followed by the permittee shall be documented and submitted for DEQ approval 90 days prior to the effective date of the changes. Upon approval, the SMP becomes an enforceable part

of the permit. The permit may be modified or, alternatively, revoked and reissued to incorporate limitations/conditions necessitated by substantive changes in sewage sludge use or disposal practices.

8. Licensed Operator Requirement -- The permittee shall employ or contract at least one Class I licensed wastewater works operator for this facility. The license shall be issued in accordance with Title 54.1 of the Code of Virginia and the regulations of the Board for Waterworks and Wastewater Works Operators. The permittee shall notify DEQ-Valley Regional Office in writing whenever he is not complying, or has grounds for anticipating he will not comply with this requirement. The notification shall include a statement of reasons and a prompt schedule for achieving compliance.
9. Reliability Class -- The permitted treatment works shall meet Reliability Class II.
10. Water Quality Criteria Monitoring -- The permittee shall monitor the effluent at outfall 001 for the substances noted in Attachment A of this permit according to the indicated analysis number, quantification level, sample type and frequency. Monitoring for the 8.4 MGD facility shall be performed within 1 year of the permit's effective date or monitoring for an expanded facility shall be performed within 1 year following issuance of the Certificate to Operate (CTO). Using Attachment A as the reporting form, the data shall be submitted with the next permit reissuance application which is due at least 180 days prior to the expiration date of this permit. Monitoring and analyses shall be conducted in accordance with 40 CFR Part 136 or alternative EPA approved method. Methods other than those specified in Attachment A may be used with prior notification to and approval from DEQ. It is the responsibility of the permittee to ensure that proper QA/QC protocols are followed during the sample gathering and analytical procedures. The DEQ will use these data for making specific permit decisions in the future. This permit may be modified or, alternatively, revoked and reissued to incorporate limits for any of the substances listed in Attachment A.
11. Any annual Total Nitrogen and/or Total Phosphorus loadings above and beyond those specified in Part I.A. of this permit shall be offset subject to the Code of Virginia 62.1-44.19:12 - :19, in addition to any laws or regulations developed pursuant thereto. A contract addressing the acquisition of nutrient credits shall be submitted for DEQ approval prior to CTO issuance. The contract shall include, but is not limited to the following:
 - a. Discussion of the source of the acquired allocations;
 - b. Discussion of other permitted facilities involved in the trade; and
 - c. Discussion of any non-point source allocations acquired.
12. Chesapeake Bay Nutrients Reopener -- This permit may be modified or, alternatively, revoked and reissued to incorporate new or alternative nutrient limitations and/or monitoring requirements should the State Water Control Board adopt new nutrient standards for the waterbody receiving the discharge, including the Chesapeake Bay or its tributaries, or if a future water quality regulation or statute requires new or alternative nutrient control.

13. General Permit Controls -- Upon the permittee obtaining coverage under a watershed general permit issued for the control of Total Nitrogen and Total Phosphorus loadings to the Chesapeake Bay or its tidal tributaries, the Total Nitrogen and Total Phosphorus annual load limitations and any associated monitoring requirements and schedule(s) of compliance contained herein shall be waived in lieu of those in the general permit.
14. Basis of Design Report for Nutrient Removal -- Within one year of the effective date of this permit, a Basis of Design Report addressing the construction and operation of a range of nutrient removal technologies up to and including the limit of technology, shall be submitted to the Department of Environmental Quality. Additional information on the scope and contents of a Basis of Design Report is available from DEQ staff. A more comprehensive Preliminary Engineering Report may be submitted to fulfill this requirement.
15. Interim Optimization Plan for Nutrient Removal -- Within one year of the effective date of this permit, a report addressing operating alternatives and interim measures that may be taken to optimize nutrient removal with the existing facilities shall be submitted to the Department of Environmental Quality. The report shall describe alternatives considered and a plan to implement the selected interim measures.
16. Treatment Works Closure Plan -- If the permittee plans an expansion or upgrade to replace the existing treatment works, or if the facility is permanently closed, the permittee shall submit to the DEQ a closure plan for the treatment works. The plan shall address liquid and sludge removal, odor control measures, structure and pipe removal, steps to prevent unauthorized access, fill materials, final grading and seeding. The plan should contain proposed dates for beginning and completion of the work. The plan must be approved by the DEQ prior to implementation. The permittee may continue discharging until the effluent no longer meets the permit limits or the permit expires, whichever occurs first.

FACILITY NAME: Opequon Water Reclamation Facility
 ADDRESS: 3100 Berryville Pike
 Winchester, VA 22603

Permit No. VA0065552
 Attachment A.1
 Page 1 of 1

DEPARTMENT OF ENVIRONMENTAL QUALITY
 WATER QUALITY MONITORING

OUTFALL NO. 001, 8.4 MGD

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL ⁽¹⁾	REPORTING RESULTS	SAMPLE TYPE ⁽²⁾	SAMPLE FREQUENCY ⁽³⁾
DISSOLVED METALS						
7440-43-9	Cadmium	(4)	1.8		G	1/5 YR
7782-49-2	Selenium	(4)	3.3		G	1/5 YR
PESTICIDES/PCB'S						
7421-93-4	Endrin Aldehyde	(5)	(6)		G or C	1/5 YR
1024-57-3	Heptachlor Epoxide	(5)	(6)		G or C	1/5 YR
319-84-6	Hexachlorocyclohexane Alpha-BHC	608	(6)		G or C	1/5 YR
319-85-7	Hexachlorocyclohexane Beta-BHC	608	(6)		G or C	1/5 YR
BASE NEUTRAL EXTRACTABLES						
111-44-4	Bis 2-Chloroethyl Ether	(5)	(6)		G or C	1/5 YR
RADIONUCLIDES						
	Strontium 90 (pCi/L)	(5)	(6)		G or C	1/5 YR
	Tritium (pCi/L)	(5)	(6)		G or C	1/5 YR
	Beta Particle & Photon Activity (mrem/yr)	(5)	(6)		G or C	1/5 YR
	Gross Alpha Particle Activity (pCi/L)	(5)	(6)		G or C	1/5 YR
ACID EXTRACTABLES						
534-52-1	2-Methyl-4,6-Dinitrophenol	(5)	(6)		G or C	1/5 YR

 Name of Principal Exec. Officer or Authorized Agent/Title

 Signature of Principal Officer or Authorized Agent/Date

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. Sec. 1001 and 33 U.S.C. Sec. 1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)

- (1) Quantification level (QL) is defined as the lowest concentration used for the calibration of a measurement system when the calibration is in accordance with the procedures published for the required method.

Units for the quantification level are micrograms/liter unless otherwise specified.

Quality control and quality assurance information shall be submitted to document that the required quantification level has been attained.

(2) Sample Type

G = Grab = An individual sample collected in less than 15 minutes. Substances specified with "grab" sample type shall only be collected as grabs. The permittee may analyze multiple grabs and report the average results provided that the individual grab results are also reported. For grab metals samples, the individual samples shall be filtered and preserved immediately upon collection.

C = Composite = A 24-hour composite unless otherwise specified. The composite shall be a combination of individual samples, taken proportional to flow, obtained at hourly or smaller time intervals. The individual samples may be of equal volume for flows that do not vary by +/- 10 percent over a 24-hour period. For composite metals samples, the individual sample aliquots shall either be filtered and preserved immediately upon collection, prior to compositing, or the composited sample shall be filtered and preserved immediately after compositing.

- (3) Frequency: 1/5 YR = once within one year of the permit's effective date.

- (4) A specific analytical method is not specified. An appropriate method shall be selected from the following list of EPA methods (or any approved method presented in 40 CFR Part 136). If the test result is less than the method QL, a "<[QL]" shall be reported where the actual analytical test QL is substituted for [QL].

<u>Metal</u>	<u>Analytical Method</u>
Cadmium	213.1; 200.7; 213.2; 200.9; 200.8; 1638; 1639; 1637; 1640
Selenium	200.7; 270.2; 200.8; 1638; 1639; 200.9

- (5) Any approved method presented in 40 CFR Part 136.

- (6) The QL is at the discretion of the permittee. For any substances addressed in 40 CFR Part 136, the permittee shall use one of the approved methods in 40 CFR Part 136.

FACILITY NAME: Opequon Water Reclamation Facility
 ADDRESS: 3100 Berryville Pike
 Winchester, VA 22603

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DEPARTMENT OF ENVIRONMENTAL QUALITY
 WATER QUALITY MONITORING

OUTFALL NO. 001, 10.4 MGD _____
 001, 12.6 MGD _____
 (Check applicable design flow tier)

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL ⁽¹⁾	REPORTING RESULTS	SAMPLE TYPE ⁽²⁾	SAMPLE FREQUENCY ⁽³⁾
DISSOLVED METALS						
7440-36-0	Antimony	(4)	5000		G	1/5 YR
7440-38-2	Arsenic	(4)	96		G	1/5 YR
7440-43-9	Cadmium	(4)	0.6		G	1/5 YR
16065-83-1	Chromium III ⁽⁹⁾	(4)	120		G	1/5 YR
18540-29-9	Chromium VI ⁽⁹⁾	(4)	6.7		G	1/5 YR
7440-50-8	Copper	(4)	156		G	1/5 YR
7439-92-1	Lead	(4)	38		G	1/5 YR
7439-97-6	Mercury	(4)	1.0		G	1/5 YR
7440-02-0	Nickel	(4)	34		G	1/5 YR
7782-49-2	Selenium	(4)	3.2		G	1/5 YR
7440-22-4	Silver	(4)	11		G	1/5 YR
7440-28-0	Thallium	(5)	(6)		G	1/5 YR
7440-66-6	Zinc	(4)	130		G	1/5 YR
PESTICIDES/PCB'S						
309-00-2	Aldrin	608	0.05		G or C	1/5 YR
57-74-9	Chlordane	608	0.2		G or C	1/5 YR
2921-88-2	Chlorpyrifos (synonym = Dursban)	622	(6)		G or C	1/5 YR
72-54-8	DDD	608	0.1		G or C	1/5 YR
72-55-9	DDE	608	0.1		G or C	1/5 YR
50-29-3	DDT	608	0.1		G or C	1/5 YR
8065-48-3	Demeton	(5)	(6)		G or C	1/5 YR
60-57-1	Dieldrin	608	0.1		G or C	1/5 YR
959-98-8	Alpha-Endosulfan	608	0.1		G or C	1/5 YR
33213-65-9	Beta-Endosulfan	608	0.1		G or C	1/5 YR
1031-07-8	Endosulfan Sulfate	608	0.1		G or C	1/5 YR
72-20-8	Endrin	608	0.1		G or C	1/5 YR
7421-93-4	Endrin Aldehyde	(5)	(6)		G or C	1/5 YR
86-50-0	Guthion	622	(6)		G or C	1/5 YR
76-44-8	Heptachlor	608	0.05		G or C	1/5 YR

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DEPARTMENT OF ENVIRONMENTAL QUALITY
 WATER QUALITY MONITORING

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL ⁽¹⁾	REPORTING RESULTS	SAMPLE TYPE ⁽²⁾	SAMPLE FREQUENCY ⁽³⁾
1024-57-3	Heptachlor Epoxide	(5)	(6)		G or C	1/5 YR
319-84-6	Hexachlorocyclohexane Alpha-BHC	608	(6)		G or C	1/5 YR
319-85-7	Hexachlorocyclohexane Beta-BHC	608	(6)		G or C	1/5 YR
58-89-9	Hexachlorocyclohexane Gamma-BHC or Lindane	608	(6)		G or C	1/5 YR
143-50-0	Kepone	(10)	(6)		G or C	1/5 YR
121-75-5	Malathion	(5)	(6)		G or C	1/5 YR
72-43-5	Methoxychlor	(5)	(6)		G or C	1/5 YR
2385-85-5	Mirex	(5)	(6)		G or C	1/5 YR
56-38-2	Parathion	(5)	(6)		G or C	1/5 YR
11096-82-5	PCB 1260	608	1.0		G or C	1/5 YR
11097-69-1	PCB 1254	608	1.0		G or C	1/5 YR
12672-29-6	PCB 1248	608	1.0		G or C	1/5 YR
53469-21-9	PCB 1242	608	1.0		G or C	1/5 YR
11141-16-5	PCB 1232	608	1.0		G or C	1/5 YR
11104-28-2	PCB 1221	608	1.0		G or C	1/5 YR
12674-11-2	PCB 1016	608	1.0		G or C	1/5 YR
1336-36-3	PCB Total	608	1.0		G or C	1/5 YR
8001-35-2	Toxaphene	608	5.0		G or C	1/5 YR
60-10-5	Tributyltin ⁽⁸⁾	NBSR 85-3295	(6)		G or C	1/5 YR
BASE NEUTRAL EXTRACTABLES						
83-32-9	Acenaphthene	625	10.0		G or C	1/5 YR
120-12-7	Anthracene	625	10.0		G or C	1/5 YR
92-87-5	Benzidine	(5)	(6)		G or C	1/5 YR
56-55-3	Benzo (a) anthracene	625	10.0		G or C	1/5 YR
205-99-2	Benzo (b) fluoranthene	625	10.0		G or C	1/5 YR
207-08-9	Benzo (k) fluoranthene	625	10.0		G or C	1/5 YR
50-32-8	Benzo (a) pyrene	625	10.0		G or C	1/5 YR
111-44-4	Bis 2-Chloroethyl Ether	(5)	(6)		G or C	1/5 YR
39638-32-9	Bis 2-Chloroisopropyl Ether	(5)	(6)		G or C	1/5 YR
85-68-7	Butyl benzyl phthalate	625	10.0		G or C	1/5 YR
91-58-7	2-Chloronaphthalene	(5)	(6)		G or C	1/5 YR
218-01-9	Chrysene	625	10.0		G or C	1/5 YR
53-70-3	Dibenz(a,h)anthracene	625	20.0		G or C	1/5 YR

FACILITY NAME: Opequon Water Reclamation Facility
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 Winchester, VA 22603

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 Attachment A.2
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DEPARTMENT OF ENVIRONMENTAL QUALITY
 WATER QUALITY MONITORING

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL ⁽¹⁾	REPORTING RESULTS	SAMPLE TYPE ⁽²⁾	SAMPLE FREQUENCY ⁽³⁾
84-74-2	Dibutyl phthalate (synonym = Di-n-Butyl Phthalate)	625	10.0		G or C	1/5 YR
95-50-1	1,2-Dichlorobenzene	625	10.0		G or C	1/5 YR
541-73-1	1,3-Dichlorobenzene	625	10.0		G or C	1/5 YR
106-46-7	1,4-Dichlorobenzene	625	10.0		G or C	1/5 YR
91-94-1	3,3-Dichlorobenzidine	(5)	(6)		G or C	1/5 YR
84-66-2	Diethyl phthalate	625	10.0		G or C	1/5 YR
117-81-7	Di-2-Ethylhexyl Phthalate	625	10.0		G or C	1/5 YR
131-11-3	Dimethyl phthalate	(5)	(6)		G or C	1/5 YR
121-14-2	2,4-Dinitrotoluene	625	10.0		G or C	1/5 YR
122-66-7	1,2-Diphenylhydrazine	(5)	(6)		G or C	1/5 YR
206-44-0	Fluoranthene	625	10.0		G or C	1/5 YR
86-73-7	Fluorene	625	10.0		G or C	1/5 YR
118-74-1	Hexachlorobenzene	(5)	(6)		G or C	1/5 YR
87-68-3	Hexachlorobutadiene	(5)	(6)		G or C	1/5 YR
77-47-4	Hexachlorocyclopentadiene	(5)	(6)		G or C	1/5 YR
67-72-1	Hexachloroethane	(5)	(6)		G or C	1/5 YR
193-39-5	Indeno(1,2,3-cd)pyrene	625	20.0		G or C	1/5 YR
78-59-1	Isophorone	625	10.0		G or C	1/5 YR
98-95-3	Nitrobenzene	625	10.0		G or C	1/5 YR
62-75-9	N-Nitrosodimethylamine	(5)	(6)		G or C	1/5 YR
621-64-7	N-Nitrosodi-n-propylamine	(5)	(6)		G or C	1/5 YR
86-30-6	N-Nitrosodiphenylamine	(5)	(6)		G or C	1/5 YR
129-00-0	Pyrene	625	10.0		G or C	1/5 YR
120-82-1	1,2,4-Trichlorobenzene	625	10.0		G or C	1/5 YR
VOLATILES						
107-02-8	Acrolein	(5)	(6)		G	1/5 YR
107-13-1	Acrylonitrile	(5)	(6)		G	1/5 YR
71-43-2	Benzene	624	10.0		G	1/5 YR
75-25-2	Bromoform	624	10.0		G	1/5 YR
56-23-5	Carbon Tetrachloride	624	10.0		G	1/5 YR
108-90-7	Chlorobenzene (synonym = monochlorobenzene)	624	50.0		G	1/5 YR
124-48-1	Chlorodibromomethane	624	10.0		G	1/5 YR
67-66-3	Chloroform	624	10.0		G	1/5 YR
75-09-2	Dichloromethane (synonym = methylene chloride)	624	20.0		G	1/5 YR

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DEPARTMENT OF ENVIRONMENTAL QUALITY
 WATER QUALITY MONITORING

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL ⁽¹⁾	REPORTING RESULTS	SAMPLE TYPE ⁽²⁾	SAMPLE FREQUENCY ⁽³⁾
75-27-4	Dichlorobromomethane	624	10.0		G	1/5 YR
107-06-2	1,2-Dichloroethane	624	10.0		G	1/5 YR
75-35-4	1,1-Dichloroethylene	624	10.0		G	1/5 YR
156-60-5	1,2-trans-dichloroethylene	(5)	(6)		G	1/5 YR
78-87-5	1,2-Dichloropropane	(5)	(6)		G	1/5 YR
542-75-6	1,3-Dichloropropene	(5)	(6)		G	1/5 YR
100-41-4	Ethylbenzene	624	10.0		G	1/5 YR
74-83-9	Methyl Bromide	(5)	(6)		G	1/5 YR
79-34-5	1,1,2,2-Tetrachloroethane	(5)	(6)		G	1/5 YR
127-18-4	Tetrachloroethylene	624	10.0		G	1/5 YR
10-88-3	Toluene	624	10.0		G	1/5 YR
79-00-5	1,1,2-Trichloroethane	(5)	(6)		G	1/5 YR
79-01-6	Trichloroethylene	624	10.0		G	1/5 YR
75-01-4	Vinyl Chloride	624	10.0		G	1/5 YR

RADIONUCLIDES

	Strontium 90 (pCi/L)	(5)	(6)		G or C	1/5 YR
	Tritium (pCi/L)	(5)	(6)		G or C	1/5 YR
	Beta Particle & Photon Activity (mrem/yr)	(5)	(6)		G or C	1/5 YR
	Gross Alpha Particle Activity (pCi/L)	(5)	(6)		G or C	1/5 YR

ACID EXTRACTABLES

95-57-8	2-Chlorophenol	625	10.0		G or C	1/5 YR
120-83-2	2,4 Dichlorophenol	625	10.0		G or C	1/5 YR
105-67-9	2,4 Dimethylphenol	625	10.0		G or C	1/5 YR
51-28-5	2,4-Dinitrophenol	(5)	(6)		G or C	1/5 YR
534-52-1	2-Methyl-4,6-Dinitrophenol	(5)	(6)		G or C	1/5 YR
87-86-5	Pentachlorophenol	625	50.0		G or C	1/5 YR
108-95-2	Phenol ⁽⁷⁾	625	10.0		G or C	1/5 YR
88-06-2	2,4,6-Trichlorophenol	625	10.0		G or C	1/5 YR

MISCELLANEOUS

16887-00-6	Chlorides	(5)	(6)		C	1/5 YR
57-12-5	Cyanide, Total	335.2	10.0		G	1/5 YR
7783-06-4	Hydrogen Sulfide	(5)	(6)		C	1/5 YR

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Attachment A.2
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DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING

Name of Principal Exec. Officer or Authorized Agent/Title

Signature of Principal Officer or Authorized Agent/Date

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. Sec. 1001 and 33 U.S.C. Sec. 1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)

Notes to Water Quality Monitoring Attachment A.

- (1) Quantification level (QL) is defined as the lowest concentration used for the calibration of a measurement system when the calibration is in accordance with the procedures published for the required method.

Units for the quantification level are micrograms/liter unless otherwise specified.

Quality control and quality assurance information shall be submitted to document that the required quantification level has been attained.

- (2) Sample Type

G = Grab = An individual sample collected in less than 15 minutes. Substances specified with "grab" sample type shall only be collected as grabs. The permittee may analyze multiple grabs and report the average results provided that the individual grab results are also reported. For grab metals samples, the individual samples shall be filtered and preserved immediately upon collection.

C = Composite = A 24-hour composite unless otherwise specified. The composite shall be a combination of individual samples, taken proportional to flow, obtained at hourly or smaller time intervals. The individual samples may be of equal volume for flows that do not vary by +/- 10 percent over a 24-hour period. For composite metals samples, the individual sample aliquots shall either be filtered and preserved immediately upon collection, prior to compositing, or the composited sample shall be filtered and preserved immediately after compositing.

- (3) Frequency: 1/5 YR = once within one year following CTO issuance for the expanded facility.
- (4) A specific analytical method is not specified. An appropriate method shall be selected from the following list of EPA methods (or any approved method presented in 40 CFR Part 136). If the test result is less than the method QL, a "<[QL]" shall be reported where the actual analytical test QL is substituted for [QL].

<u>Metal</u>	<u>Analytical Method</u>
Antimony	204.1; 200.7; 204.2; 1639; 1638; 200.8
Arsenic	200.7; 200.9; 200.8; 1632
Cadmium	213.1; 200.7; 213.2; 200.9; 200.8; 1638; 1639; 1637; 1640
Chromium ⁽⁹⁾	218.1; 200.7; 218.2; 218.3; 200.9; 1639; 200.8
Chromium VI	218.4; 1636
Copper	220.1; 200.7; 220.2; 200.9; 1638; 1640; 200.8
Lead	239.1; 200.7; 239.2; 200.9; 200.8; 1638; 1637; 1640
Mercury	200.7; 245.1; 200.8; 1631
Nickel	249.1; 200.7; 249.2; 1639; 200.9; 1638; 200.8; 1640
Selenium	200.7; 270.2; 200.8; 1638; 1639; 200.9
Silver	272.1; 200.7; 200.9; 272.2; 1638; 200.8
Zinc	289.1; 200.7; 1638; 1639; 200.8; 289.2

- (5) Any approved method presented in 40 CFR Part 136.
- (6) The QL is at the discretion of the permittee. For any substances addressed in 40 CFR Part 136, the permittee shall use one of the approved methods in 40 CFR Part 136.
- (7) Testing for phenol requires continuous extraction.
- (8) Analytical Methods: NBSR 85-3295 or DEQ's approved analysis for Tributyltin may also be used [See A Manual for the Analysis of Butyltins in Environmental Systems by the Virginia Institute of Marine Science, dated November 1996].
- (9) Both Chromium III and Chromium VI may be measured by the total chromium analysis. If the result of the total chromium analysis is less than or equal to the lesser of the Chromium III or Chromium VI method QL, the results for both Chromium III and Chromium VI can be reported as "<[QL]", where the actual analytical test QL is substituted for [QL].
- (10) The lab may use SW846 Method 8270C provided the lab has an Initial Demonstration of Capability, has passed a PT for Kepone, and meets the acceptance criteria for Kepone as given in Method 8270C.

CONDITIONS APPLICABLE TO ALL VPDES PERMITS

A. Monitoring

1. Samples and measurements taken as required by this permit shall be representative of the monitored activity.
2. Monitoring shall be conducted according to procedures approved under Title 40 Code of Federal Regulations Part 136 or alternative methods approved by the U.S. Environmental Protection Agency, unless other procedures have been specified in this permit.
3. The permittee shall periodically calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals that will insure accuracy of measurements.

B. Records

1. Records of monitoring information shall include:
 - a. The date, exact place, and time of sampling or measurements;
 - b. The individual(s) who performed the sampling or measurements;
 - c. The date(s) and time(s) analyses were performed;
 - d. The individual(s) who performed the analyses;
 - e. The analytical techniques or methods used; and
 - f. The results of such analyses.
2. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years, the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period of retention shall be extended automatically during the course of any unresolved litigation regarding the regulated activity or regarding control standards applicable to the permittee, or as requested by the Board.

C. Reporting Monitoring Results

1. The permittee shall submit the results of the monitoring required by this permit not later than the 10th day of the month after monitoring takes place, unless another reporting schedule is specified elsewhere in this permit. Monitoring results shall be submitted to:

Department of Environmental Quality
Valley Regional Office
P.O. Box 3000
Harrisonburg, Virginia 22801

2. Monitoring results shall be reported on a Discharge Monitoring Report (DMR) or on forms provided, approved or specified by the Department.
3. If the permittee monitors any pollutant specifically addressed by this permit more frequently than required by this permit using test procedures approved under Title 40 of the Code of Federal Regulations Part 136 or using other test procedures approved by the U.S. Environmental Protection Agency or using procedures specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or reporting form specified by the Department.
4. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.

D. Duty to Provide Information

The permittee shall furnish to the Department, within a reasonable time, any information which the Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Board may require the permittee to furnish, upon request, such plans, specifications, and other pertinent information as may be necessary to determine the effect of the wastes from his discharge on the quality of State waters, or such other information as may be necessary to accomplish the purposes of the State Water Control Law. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

E. Compliance Schedule Reports

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

F. Unauthorized Discharges

Except in compliance with this permit, or another permit issued by the Board, it shall be unlawful for any person to:

1. Discharge into State waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances; or
2. Otherwise alter the physical, chemical or biological properties of such State waters and make them detrimental to the public health, or to animal or aquatic life, or to the use of such waters for domestic or industrial consumption, or for recreation, or for other uses.

G. Reports of Unauthorized Discharges

Any permittee who discharges or causes or allows a discharge of sewage, industrial waste, other wastes or any noxious or deleterious substance into or upon State waters in violation of Part II.F.; or who discharges or causes or allows a discharge that may reasonably be expected to enter State waters

in violation of Part II.F., shall notify the Department of the discharge immediately upon discovery of the discharge, but in no case later than 24 hours after said discovery. A written report of the unauthorized discharge shall be submitted to the Department, within five days of discovery of the discharge. The written report shall contain:

1. A description of the nature and location of the discharge;
2. The cause of the discharge;
3. The date on which the discharge occurred;
4. The length of time that the discharge continued;
5. The volume of the discharge;
6. If the discharge is continuing, how long it is expected to continue;
7. If the discharge is continuing, what the expected total volume of the discharge will be; and
8. Any steps planned or taken to reduce, eliminate and prevent a recurrence of the present discharge or any future discharges not authorized by this permit.

Discharges reportable to the Department under the immediate reporting requirements of other regulations are exempted from this requirement.

H. Reports of Unusual or Extraordinary Discharges

If any unusual or extraordinary discharge including a bypass or upset should occur from a treatment works and the discharge enters or could be expected to enter State waters, the permittee shall promptly notify, in no case later than 24 hours, the Department by telephone after the discovery of the discharge. This notification shall provide all available details of the incident, including any adverse affects on aquatic life and the known number of fish killed. The permittee shall reduce the report to writing and shall submit it to the Department within five days of discovery of the discharge in accordance with Part II.I.2. Unusual and extraordinary discharges include but are not limited to any discharge resulting from:

1. Unusual spillage of materials resulting directly or indirectly from processing operations;
2. Breakdown of processing or accessory equipment;
3. Failure or taking out of service some or all of the treatment works; and
4. Flooding or other acts of nature.

I. Reports of Noncompliance

The permittee shall report any noncompliance which may adversely affect State waters or may endanger public health.

1. An oral report shall be provided within 24 hours from the time the permittee becomes aware of the circumstances. The following shall be included as information which shall be reported within 24 hours under this paragraph:
 - a. Any unanticipated bypass; and
 - b. Any upset which causes a discharge to surface waters.

2. A written report shall be submitted within 5 days and shall contain:

- a. A description of the noncompliance and its cause;
- b. The period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and
- c. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

The Board may waive the written report on a case-by-case basis for reports of noncompliance under Part II.I. if the oral report has been received within 24 hours and no adverse impact on State waters has been reported.

3. The permittee shall report all instances of noncompliance not reported under Parts II.I.1. or 2., in writing, at the time the next monitoring reports are submitted. The reports shall contain the information listed in Part II.I.2.

NOTE: The immediate (within 24 hours) reports required in Parts II.G, H, and I may be made to the Department's Valley Regional Office at (540) 574-7800 (voice) or (540) 574-7878 (fax). For reports outside normal working hours, leave a message and this shall fulfill the immediate reporting requirement. For emergencies, the Virginia Department of Emergency Services maintains a 24-hour telephone service at 1-800-468-8892.

J. Notice of Planned Changes

1. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

- a. The permittee plans alteration or addition to any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:
 - (1) After promulgation of standards of performance under Section 306 of the Clean Water Act which are applicable to such source; or
 - (2) After proposal of standards of performance in accordance with Section 306 of the Clean Water Act which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal;
- b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations nor to notification requirements specified elsewhere in this permit; or
- c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including

notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

2. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

K. Signatory Requirements

1. Applications. All permit applications shall be signed as follows:

- a. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
- b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
- c. For a municipality, State, Federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a public agency includes: (i) The chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

2. Reports, etc. All reports required by permits, and other information requested by the Board shall be signed by a person described in Part II.K.1., or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- a. The authorization is made in writing by a person described in Part II.K.1.;
- b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and
- c. The written authorization is submitted to the Department.

3. Changes to authorization. If an authorization under Part II.K.2. is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part II.K.2. shall be submitted to the Department prior to or together with any reports, or information to be signed by an authorized representative.
4. Certification. Any person signing a document under Parts II.K.1. or 2. shall make the following certification: "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

L. Duty to Comply

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the State Water Control Law and the Clean Water Act, except that noncompliance with certain provisions of this permit may constitute a violation of the State Water Control Law but not the Clean Water Act. Permit noncompliance is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if this permit has not yet been modified to incorporate the requirement.

M. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall apply for and obtain a new permit. All permittees with a currently effective permit shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Board. The Board shall not grant permission for applications to be submitted later than the expiration date of the existing permit.

N. Effect of a Permit

This permit does not convey any property rights in either real or personal property or any exclusive privileges, nor does it authorize any injury to private property or invasion of personal rights, or any infringement of Federal, State or local law or regulations.

O. State Law

Nothing in this permit shall be construed to preclude the institution of any legal action under, or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any other State law or regulation or under authority preserved by Section 510 of the Clean Water Act.

Except as provided in permit conditions on "bypassing" (Part II.U.), and "upset" (Part II.V.) nothing in this permit shall be construed to relieve the permittee from civil and criminal penalties for noncompliance.

P. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Sections 62.1-44.34:14 through 62.1-44.34:23 of the State Water Control Law.

Q. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes effective plant performance, adequate funding, adequate staffing, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by the permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

R. Disposal of Solids or Sludges

Solids, sludges or other pollutants removed in the course of treatment or management of pollutants shall be disposed of in a manner so as to prevent any pollutant from such materials from entering State waters.

S. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

T. Need to Halt or Reduce Activity not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

U. Bypass

1. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Parts II.U.2. and U.3.

2. Notice

- a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, prior notice shall be submitted, if possible at least ten days before the date of the bypass.
- b. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Part II.I.

3. Prohibition of bypass

- a. Bypass is prohibited, and the Board may take enforcement action against a permittee for bypass, unless:
 - (1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - (2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - (3) The permittee submitted notices as required under Part II.U.2.
- b. The Board may approve an anticipated bypass, after considering its adverse effects, if the Board determines that it will meet the three conditions listed above in Part II.U.3.a.

V. Upset

1. An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of Part II.V.2. are met. A determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is not a final administrative action subject to judicial review.
2. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - a. An upset occurred and that the permittee can identify the cause(s) of the upset;
 - b. The permitted facility was at the time being properly operated;
 - c. The permittee submitted notice of the upset as required in Part II.I.; and
 - d. The permittee complied with any remedial measures required under Part II.S.

3. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

W. Inspection and Entry

The permittee shall allow the Director, or an authorized representative, upon presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act and the State Water Control Law, any substances or parameters at any location.

For purposes of this section, the time for inspection shall be deemed reasonable during regular business hours, and whenever the facility is discharging. Nothing contained herein shall make an inspection unreasonable during an emergency.

X. Permit Actions

Permits may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

Y. Transfer of Permits

1. Permits are not transferable to any person except after notice to the Department. Except as provided in Part II.Y.2, a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued, or a minor modification made, to identify the new permittee and incorporate such other requirements as may be necessary under the State Water Control Law and the Clean Water Act.
2. As an alternative to transfers under Part II.Y.1., this permit may be automatically transferred to a new permittee if:
 - a. The current permittee notifies the Department at least 30 days in advance of the proposed transfer of the title to the facility or property;
 - b. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and

- c. The Board does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in Part II.Y.2.b.

Z. Severability

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.